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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/628,878	07/28/2003	Zhi Heng	9896-000007	3895
27572	7590	01/16/2008	EXAMINER	
HARNESS, DICKEY & PIERCE, P.L.C. P.O. BOX 828 BLOOMFIELD HILLS, MI 48303			CHEEMA, UMAR	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)
	10/628,878	HENG, ZHI
	Examiner	Art Unit
	Umar Cheema	2144

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 05 November 2007.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-10 is/are pending in the application.
 - 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-10 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 28 July 2003 is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 10/17/2007.
- 4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) Notice of Informal Patent Application
- 6) Other: _____.

DETAILED ACTION

Response to Amendment

1. This action is response to the Amendment filed on 05 November 2007. Claims 1-10 are pending in this application. Claims 1, 7 and 10 have been amended.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

2. **Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ciscon et al (Ciscon) (US PGPUB 2002/0004827) in further view of Srivastava (US 6,684,331).**

Regarding claim 1, Ciscon discloses a multi-layer user management (see title, abstract, par. 0003) method for multicasting proxy, comprising:

dividing a user management for multicasting groups into three layers (see abstract, par. 0003): management at an interface layer for controlling multicasting characteristics corresponding to interfaces (see abstract, par. 0014), management at a data link layer (fig. 2 (224)) for controlling multicasting characteristics corresponding to data links and management at user layer (see abstract, fig 1), for controlling multicasting characteristics corresponding to particular users, and at each layer, setting control blocks that are respectively comprised of multicasting characteristic data corresponding to said each layer (see abstract, par. 0003, 0013,0014); establishing a data relationship among the three layers of control blocks (see par. 0073, fig. 4); and managing a user of the multicasting groups using the data relationship among the three layers of control blocks (see abstract, fig. 3-4).

Ciscon does not disclose management system including **multicasting proxy** in his disclosure. However in the same field of endeavor, Srivastava discloses multicasting proxy in his invention (see abstract, col. 5, lines 1-10; multicast proxy service node).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teaching of Ciscon and Srivastava for multi-layer user management system for multicasting server proxy. Motivation for doing so would have been the proxy server is designed to provide extensible firewall and network security (see Srivastava: col. 2, lines 55-57).

Regarding **claim 2**, Ciscon discloses the method of Claim 1, wherein said controlling multicasting characteristics corresponding to interfaces includes (see par. 0014): judging whether to allow multicasting applications at an interface, judging whether to allow multicasting applications at a user side or a network side, judging whether to allow tying multicasting resources or multicasting groups, limiting the number of members of a multicasting group or limiting the number of multicasting groups (see par. 0026, 0085, fig. 4). (Note: Ciscon et al introduce the Network Controller which may use MPLS to a network layer or any other OSI (seven layer model) layer for controlling, determining, and managing data packets for multicasting (par. 0085)).

Regarding **claim 3**, Ciscon discloses the method of Claim 1, wherein said controlling multicasting characteristics corresponding to data links is operable to limit the number of members of a multicasting group when employing a core layer network device such as an Edge Service Router (ESR) (see par. 0039, 0040).

Regarding **claim 4**, Ciscon discloses the method of Claim 1, wherein said controlling multicasting characteristics corresponding to data links is forwarding only one multicasting packet for all members of the same multicasting group at the same data link when forwarding data (see par. 0036, par. 0038).

Regarding **claim 5**, Ciscon discloses the method of Claim 1, wherein the data relationship is established through a linking-list structure or a relational database structure (see par. 0036).

Regarding **claim 6**, Ciscon discloses the method of Claim 1, wherein the data relationship is established through a three-dimensional linking-list data structure which links each control block with linking-lists or arrays; the three dimensions of the three-dimensional linking-list data structure comprise data link including interface, multicasting group and user IP (see par. 0038, 0039, 0040).

Regarding **claim 7**, the combination of Ciscon and Srivastava disclose the method of Claim 1, wherein said managing a user of the multicasting group is managing the user's joining or leaving the multicasting group; and said managing the user's joining or leaving the multicasting group (see Srivastava: col. 7, lines 21-28), comprises: finding a certain interface layer control block according to data structure of an interface of net (IFNET) having received a multicasting packet (see Ciscon: par. 0056); then judging multicasting characteristics of the multicasting group which are defined in the found interface layer control block to determine whether to continue the successive processing; if so, performing the next steps, otherwise ending the processing (see Ciscon: par. 0072); finding a certain data link layer control block according to the data relationship between data link layer control blocks and said interface layer control block (see Ciscon: par. 0037); then judging multicasting characteristics corresponding to data

links of the multicasting packet to determine whether to continue the successive processing; if so, performing the next step, otherwise ending the processing (see Ciscon: par. 0072); and finding a certain user layer control block according to a multicasting group IP and user attributes; then adding, deleting or modifying corresponding user information in the user layer control block (see Ciscon: par. 0039, par. 0085).

Regarding **claim 8**, Ciscon discloses the method of Claim 7, further comprising: if no proper data link control block is found when finding a certain data link control block, adding a new data link layer control block at the data link (see par. 0037, 0085); and establishing the data relationship among interface layer control blocks, user layer control blocks and the new data link layer control block (see par. 0085).

Regarding **claim 9**, Ciscon discloses the method of Claim 1, wherein managing the users of the multicasting groups is forwarding control, further comprising: making data link layer devices attend multicasting management with device cluster control technique (see Ciscon: par. 0056, fig. 4).

Regarding **claim 10**, Ciscon discloses the method of Claim 1, wherein said managing a user of the multicasting group is performing flow charging control to the user of the multicasting group; and said performing flow charging control to the user of the multicasting group (see abstract, figure 3) comprises: recording the flow of multicasting

packets having been forwarded with a device forwarding program and charging the user who has received said multicasting packets (see par. 0030, 0034).

3. **Examiner's Note:** Applicant failed to show the proper Amendment regarding to claim 3. Claims 3 limitations "when employing a core edge layer network device such as an Edge Service Router (ESR)" were not previously presented and therefore claim 3 should not show as (original). Applicant is requested to properly Amended claim 3 and underline the amended part of the claim in future action. Claim 3 has been considered as currently Amended by the Examiner.

Response to Arguments

4. Applicant's arguments filed on 05 November 2007 have been fully considered but they are not persuasive. However, because there exists the likelihood of future presentation of this argument, the Examiner thinks that it is prudent to address applicant's main point of contention. Applicant's arguments include:

A. Regarding to Claim 1 Applicant argues:

1. "Applicant argues that Ciscon and Srivastave do not establish a *prima facie* case of obviousness."
2. "Although both Claim 1 and Ciscon mention the "multi-layers" concept and the "multi-layer management" concept, the specific meaning of these concepts in claim 1 and Ciscon are different."

3. "Ciscon fails to teach or suggest the technical features dividing a user management for multicasting group into three layers, management at an interface layer, management at a data link layer and management at user layer in claim 1."

As for Point A, In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Ciscon teaches or suggests broadcasting communications over a multi-layered network (see abstract; par. 0013) and Srivastave teaches or suggests establishing secure multicast communication among multiple multicast proxy service node of domains of a replicated directory service (see abstract, col. 5, lines 2-8). Thus it is the Examiners position that the 35 U.S.C 103 (a) rejection is proper and motivation is suggested within the prior arts.

With respect to Applicant's argument that multi-layer concept of Ciscon and claim 1 is different and fails to teach or suggest the technical features dividing a user management for multicasting group into three layers, management at an interface layer, management at a data link layer and management at user layer. Thus it is Examiners position as argued above that Ciscon and Srivastave are in same field of invention and

therefore does establish a *prima facie* case of obviousness for the given reason above.

Thus it is the Examiners position that 35 U.S.C 103 (a) rejection is proper with respect to claim 1.

5. **Examiner's Note:** Examiner has cited particular paragraphs, figures, columns and line numbers in the references as applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings in the art and are applied to the specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant, in preparing the responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the examiner.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Umar Cheema whose telephone number is 571-270-3037. The examiner can normally be reached on M-F 8:00AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Vaughn, Jr. can be reached on 571-272-3922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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